## 4,517,794 Sakai et al. Date of Patent: May 21, 1985 [45] [54] METHOD OF GUIDING YARN END IN AIR [56] References Cited SPINNING APPARATUS U.S. PATENT DOCUMENTS [75] Inventors: Shoji Sakai, Kyoto; Michiaki Fujiwara, Shinomachi; Nobunori 4,169,350 10/1979 Yamana et al. ..... 57/261 X Kubota; Koshi Noda, both of Kyoto, all of Japan Primary Examiner—Donald Watkins Murata Kikai Kabushiki Kaisha, Attorney, Agent, or Firm-Spensley, Horn, Jubas & [73] Assignee: Lubitz Kyoto, Japan [57] ABSTRACT [21] Appl. No.: 335,222 A device for the uniform retrieval of yarn ends in an air [22] Filed: Dec. 28, 1981 spinning device. A suction force gradient is created [30] Foreign Application Priority Data between the air jet nozzle and the waste suction pipe. Gravitational force and the suction gradient cause bro-Oct. 22, 1981 [JP] Japan ...... 56-169527 ken yarn ends to drop from the air jet nozzle orifice [51] Int. Cl.<sup>3</sup> ...... D01H 11/00; D02G 1/16 toward the waste suction pipe. When yarn piecing is desired, a piecing suction pipe retrieves the yarn end [52] U.S. Cl. ...... 57/304; 57/261; from the nozzle orifice.

[11]

United States Patent [19]

[58] Field of Search ...... 57/300, 301, 303, 304,

57/306, 22, 261, 908, 328

14 Claims, 3 Drawing Figures

Patent Number:

